UNITED STATES FISH AND WILDLIFE SERVICE

Region 1
Portland, Oregon

# ENVIRONMENTAL ACTION MEMORANDUM

Transfer of Indian Lakes Area
To Churchill County, Nevada

Within the spirit and intent of the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the action of transferring the Indian Lakes area to Churchill County is found not to have significant environmental effects as determined by the attached Environmental Assessment. The attached Finding of No Significant Impact is final.

Other supporting documents include:

- Public Law 101-618
- 1948 Tripartite Agreement -- Truckee-Carson Irrigation District (TCID), Nevada State Board of Fish and Game Commissioners, and the U.S. Fish and Wildlife Service
- Executive Orders 11988 and 11990

Regional Director

4/30/96
Date

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DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE

Region 1, Portland, Oregon

# FINDING OF NO SIGNIFICANT IMPACT

## Introduction

The Truckee-Carson-Pyramid Lake Water Settlement Act (Public Law 101-618, Title II) authorizes the Secretary of the Department of the Interior to transfer the Indian Lakes area to the State of Nevada or Churchill County, Nevada, pursuant to an agreement between the Secretary and the State of Nevada or Churchill County, for the purposes of fish, wildlife, and recreation (§ 206(g)). The Indian Lakes area currently is part of Stillwater Wildlife Management Area (Stillwater WMA), and is located about 10 miles north of the City of Fallon, Churchill County, Nevada.

## Proposed Action:

The Service proposes to transfer the Indian Lakes portion of the Stillwater Wildlife Management Area to Churchill County, Nevada for the purposes of fish, wildlife, and outdoor recreation. Based on ongoing communications between Churchill County and the City of Fallon, Churchill County intends to subsequently convey the Indian Lakes area to the City of Fallon for the same purposes. As part of the Proposed Action, the 1948 Tripartite Agreement between the Service, Nevada Division of Wildlife, and the Truckee-Carson Irrigation District would be terminated as it applies to the Indian Lakes area.

Under the Proposed Action, easements would be reserved by the United States for existing irrigation canals and ditches, a possible future Indian Lakes bypass canal, existing recreational activities including camping, picnicking, swimming, fishing, hunting, and similar activities, and for the protection and study of cultural resources. Existing roadways would be dedicated for continued public access. Before action is taken to transfer lands to Churchill County, the Department of the Interior would consult with the Nevada State Historical Preservation Office on cultural resource issues.

## Alternatives

Alternatives to the Proposed Action explored in this environmental assessment are (1) transfer of the Indian Lakes area to the State of Nevada, (2) add the Indian Lakes area to Stillwater National Wildlife Refuge in 1998, and (3) retain the Indian Lakes area as a Bureau of Reclamation withdrawal for Newlands Irrigation Project operations (No Action Alternative).

## Rationale

The following describes why the Proposed Action will not have significant impacts on the human environment:

1. The Proposed Action would not significantly change water quality below that which occurs under existing conditions.

2. Under the Proposed Action, the Indian Lakes area would continue to provide habitat for fish and wildlife, habitat quality not changing substantially from current conditions. Cui-ui (an endangered fish), of the Pyramid Lake, would not be affected because Newlands Irrigation Project operations would not be affected (see 3 below).

3. The Proposed Action would not affect Newlands Irrigation Project operations. If the Indian Lakes area is transferred to Churchill County, easements would be established along existing Newlands Project delivery canals and drains. Furthermore, easements would be reserved by the United States for the construction of an Indian Lakes bypass canal, if such a canal is constructed, and for existing irrigation canals and ditches. If the entity that ultimately receives the Indian Lakes area seeks to transfer water rights that have historically been put to beneficial use and are uncontested at the 2.99 AF/acre/year use-rate (municipal and industrial (M&I) or recreation use-rate), there would not be an increase in Carson Division irrigation demand or increase in Truckee River diversions for Newlands Project irrigation.

4. Opportunities for outdoor recreation would not be significantly affected by the Proposed Action because one of the purposes for which the Indian Lakes area is being transferred is for outdoor recreational use. Easements would be reserved by the United States for existing recreational activities including camping, picnicking, swimming, fishing, hunting, and similar activities.

5. The Proposed Action would not significantly affect livestock grazing, commercial fishing, and muskrat trapping activities in the Indian Lakes area.

6. Under the Proposed Action, easements would be reserved by the United States for the protection and study of cultural resources. Furthermore, consultation between the U.S. Department of the Interior and the Nevada State Historic Preservation Office would take place prior to transferring the Indian Lakes area to Churchill County.

7. The Proposed Action would not significantly affect public access onto or through the Indian Lakes area because existing roadways would be dedicated for continued public access.

Determination

Based upon the information contained in the environmental assessment, the Service has determined that this action would not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of §102(2)(C) of the National Environmental Policy Act. Accordingly, the preparation of an Environmental Impact Statement on the Proposed Action is not required.

Of the 10 items identified in §1508.27 of the Council on Environmental Quality Regulations, the following are not discussed for the following reasons: there are no effects on unique characteristics of the geographic area (e.g., historic and cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers); there are no highly controversial effects; there are no highly uncertain, unique, or unknown risks; the action does not establish a precedent for future actions; there no significant cumulative effects (including those discussed above); there are no adverse impacts to districts, sites,

highways, structures, or objects listed, or eligible for listing, in the National Register of Historic Places; and there are no violations of Federal, State, or local laws.

The proposal has been coordinated with interested and/or affected agencies and organizations. The environmental assessment and this finding of no significant impact (FONSI) are available upon request from the U.S. Fish and Wildlife Service, Stillwater National Wildlife Refuge, P.O. Box 1236, Fallon, Nevada 89407 (telephone: 702-423-5128).

3/22/96
Date

WILLIAM F. SHAKE
for Regional Director, Region 1
U.S. Fish and Wildlife Service
Portland, Oregon

Final Environmental Assessment

for

# TRANSFER OF INDIAN LAKES AREA TO CHURCHILL COUNTY, NEVADA


LEAD FEDERAL AGENCY: U.S. Department of the Interior
Fish and Wildlife Service

RESPONSIBLE OFFICIAL: Michael J. Spear, Regional Director
Fish and Wildlife Service, Portland, Oregon

CONTACT PERSON: Ronald M. Anglin, Project Leader
Stillwater National Wildlife Refuge
P.O. Box 1236
Fallon, Nevada 89407
(702) 423-5128

PREPARERS: Don C. DeLong, Jr., Fish and Wildlife Biologist
Gary S. Shellhorn, Natural Resource Planner
Richard P. Grimes, Senior Realty Specialist



## ABSTRACT:

The Secretary of the Department of the Interior (the lead agency being the U.S. Fish and Wildlife Service) proposes to transfer the Indian Lakes portion of the Stillwater Wildlife Management Area to Churchill County, Nevada, in accordance with the Truckee-Carson-Pyramid Lake Water Settlement Act of 1990 (Title II of Public Law 101-618). Alternatives to the Proposed Action explored in this environmental assessment are (1) transfer of the Indian Lakes area to the State of Nevada, (2) add the Indian Lakes area to Stillwater National Wildlife Refuge in 1998, and (3) retain the Indian Lakes area as a Bureau of Reclamation withdrawal (No Action Alternative). This environmental assessment assesses the potential impacts of this action on recreation opportunities, public access, Newlands Irrigation Project operations, commercial uses, fish and wildlife, and cultural resource protection.

## I. PURPOSE AND NEED FOR ACTION

The Indian Lakes area currently is part of Stillwater Wildlife Management Area (Stillwater WMA), and is located about 10 miles north of the City of Fallon, Churchill County, Nevada (Figure 1). The total area encompassed within the proposed boundaries is 10,240 acres (16 square miles). Of this, approximately 9,355 acres of public land are proposed for transfer; the 885 acres of privately owned land within the boundaries of the Indian Lakes area would remain as private inholdings (Figure 2).

### A. Purpose and Need of the Action

The purpose of transferring the Indian Lakes portion of Stillwater Wildlife Management Area to Churchill County, Nevada is to provide a locally-administered area for fish, wildlife, and outdoor recreation. Currently, no County or City outdoor recreational facilities of this nature exist in the area. Providing such an area near Fallon would enhance recreational opportunities, which will become increasingly important as the population of the Fallon area continues to grow. As discussed under the Proposed Action (Section II), it is anticipated that Churchill County will subsequently transfer the Indian Lakes area to the City of Fallon.

In the 1970s, there was considerable interest in transferring the Indian Lakes area to the Nevada Division of State Parks (NDSP). Assembly Bill 701 was introduced into the Nevada State Legislature to establish a state park at Indian Lakes. This bill was subsequently dropped, and, while there was some interest in the next legislative session, a bill was not reintroduced.

Interest in creating a recreation area arose again in the late 1980s, a consequence of which was Section 206(g) of Public Law 101-618 authorizing the Secretary of the Interior to convey the Indian Lakes area to the State of Nevada or Churchill County. Section 206(g) of Public Law 101-618 specifies that the transfer is to be "...for the purposes of fish and wildlife, and recreation..."

B. Decision to be Made

The decision to be made relative to this environmental assessment is whether the Indian Lakes area should be transferred to Churchill County. This environmental assessment identifies and describes the Proposed Action and three other possible alternatives.

C. Issues, Concerns, and Responsibilities

The following issues, posed as questions, were identified as significant issues:

(1) **How will recreation opportunities and public access be affected?** Any substantial change from current management, especially changes in land-use regulations, fish stocking, and facility development and maintenance, would have direct effects on opportunities available to the public and the quality of those opportunities.

(2) **How will Newlands Project operations be affected?** Any structural or operational changes that would affect the flow of irrigation water through the Indian Lakes area could impact the potential of the Newlands Project operator to deliver water to Stillwater National Wildlife Refuge (Stillwater NWR) or other irrigators downstream of the recording gauge located at the east D-Line Canal upstream from Indian Lakes. Another related issue is whether the transfer of Indian Lakes would affect the possibility of constructing an irrigation canal to bypass the lakes within the area. At present, irrigation water delivered to the north and east of Indian Lakes flows through several of the lakes.

(3) **How will commercial uses be affected?** Changes in the livestock grazing program at Indian Lakes would have direct consequences on permittees that graze their cattle in the Indian Lakes area. Changes in fisheries management also could impact commercial fishing (common carp and Sacramento blackfish) in the Indian Lakes area.

(4) **How will fish and wildlife be affected?** Changes in the management of recreation and commercial uses, depending on the degree of change, would

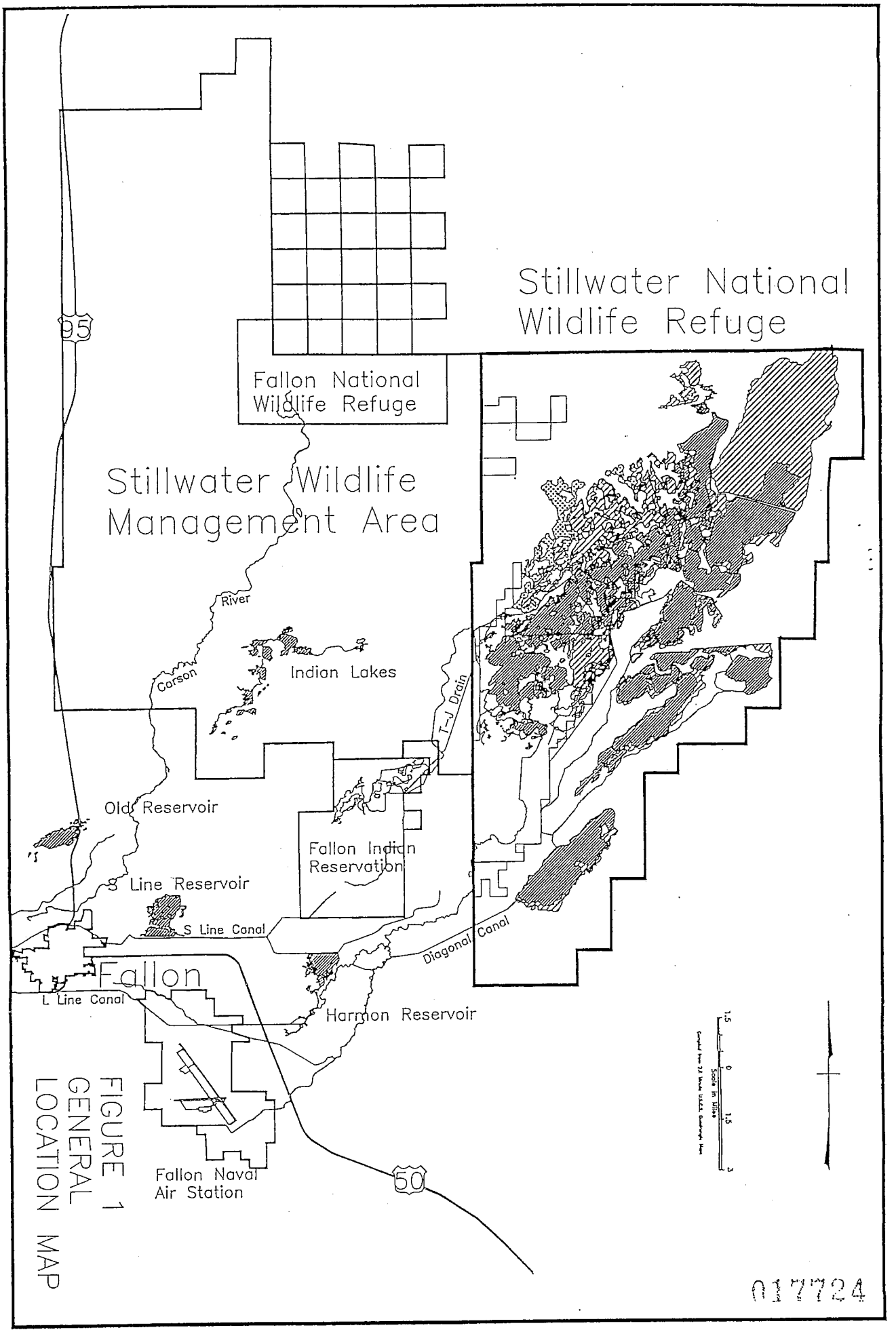


FIGURE 1
GENERAL
LOCATION MAP

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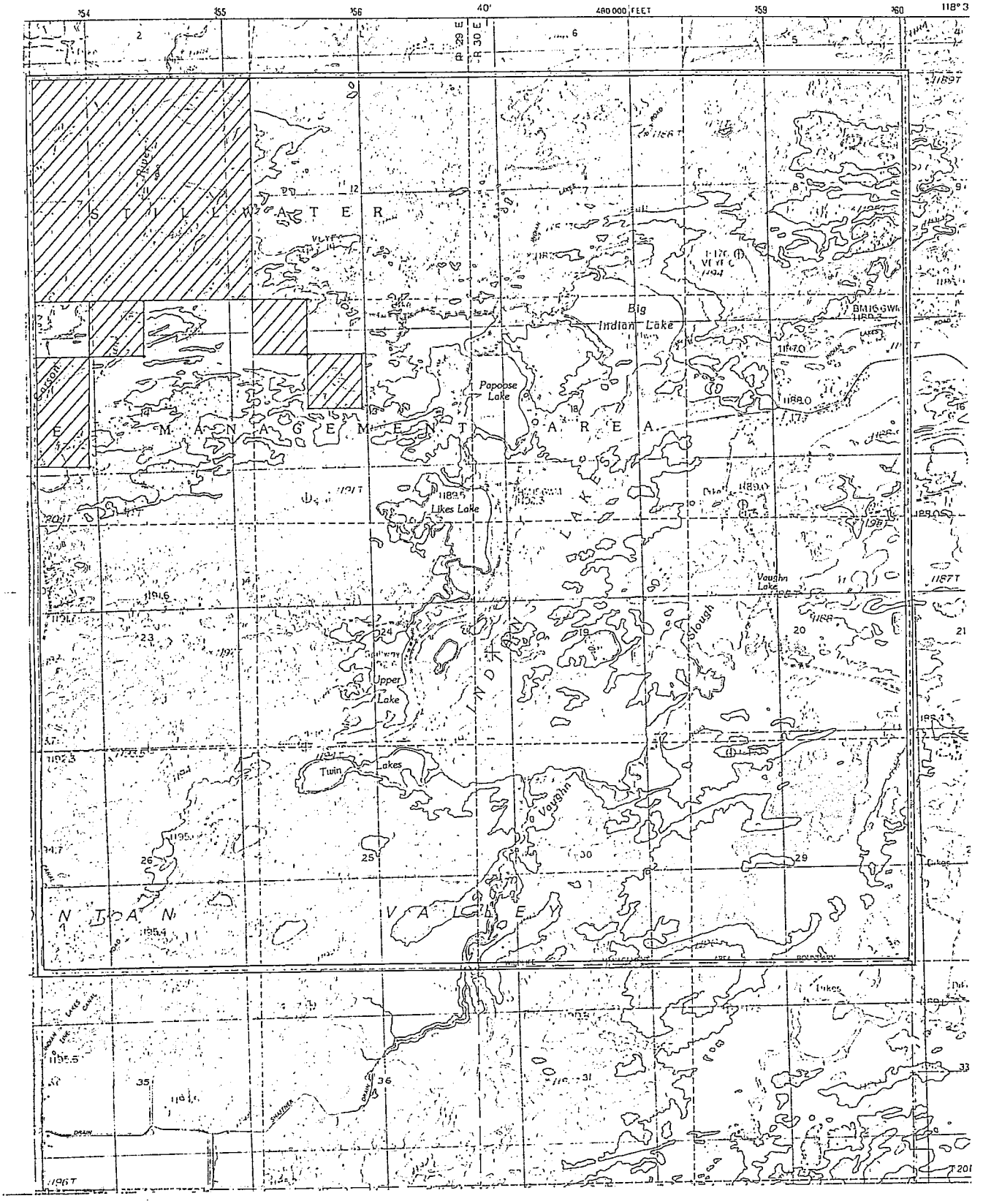


Figure 2. Indian Lakes area being proposed for transfer under Public Law 101-618. Cross-hatched lines represent non-federal lands, which would not be subject to the transfer.

affect fish and wildlife populations. Concerns have been raised that the Proposed Action could impact cui-ui, a fish species federally listed as an endangered species, of Pyramid Lake.

(5) **How will water resource conditions affect the new owners of Indian Lakes?** One concern of transferring the Indian Lakes area to a non-federal entity is whether the new owners of the area would assume liability if water contamination, stemming from conditions that occurred prior to the transfer, arises as a problem in the future.

Other issues that are tracked in this environmental assessment include possible impacts to cultural resources and the Carson River flood plain.

D. Federal and State Permits, Findings, and Approvals

In order to proceed on the transfer of the Indian Lakes area to Churchill County, the Bureau of Land Management (BLM) must issue a patent in the appropriate format. In order to proceed with the Proposed Action, the 1948 Tripartite Agreement relative to the Indian Lakes area would have to be terminated prior to the area being transferred to Churchill County. The 1948 Tripartite Agreement is a 50-year agreement between the Truckee-Carson Irrigation District (TCID), Nevada State Board of Fish and Game Commissioners, and the Service for the management of wildlife and livestock grazing on Stillwater WMA. It expires in November 1998.

Executive Orders 11988 and 11990 direct that, when Federal property in a floodplain or a Federally-owned wetland are proposed for disposal to a non-Federal party, "the Federal agency shall (a) reference in the conveyance those uses that are restricted under identified Federal, State, or local wetlands regulations; and (b) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law; or (c) withhold such properties from disposal."

## II. ALTERNATIVES INCLUDING THE PROPOSED ACTION

This section presents the Proposed Action and three other alternatives that are being considered by the Service. Table 1 (at the end of this section) presents a comparative summary of the effects of the Proposed Action and other alternatives.

The following assumptions apply to all alternatives, including the Proposed Action: (1) no water rights would be transferred as part of any alternative, (2) public access would be maintained, and (3) Newlands Project irrigation canals and drains meandering through the Indian Lakes area would continue to be used by the Newlands Project operator for the intended uses.

### 1. Proposed Action - Transfer of Indian Lakes Area to Churchill County

Under the Proposed Action, the Service would transfer the Indian Lakes area to Churchill County for the purposes of fish, wildlife, and outdoor recreation. Based on ongoing communications between Churchill County and the City of Fallon, Churchill County intends to subsequently convey the Indian Lakes area to the City of Fallon for the same purposes. A letter of intent from the City of Fallon, dated April 19, 1995, identified their desire to acquire the Indian Lakes area (R.H. Erickson, Mayor, City of Fallon, written communication, 1995). A letter of intent from Churchill County that would allow the City of Fallon to continue to pursue the possibility of acquiring the Indian Lakes area is forthcoming (minutes of Churchill County Commissioner's July 19, 1995 meeting). As part of the Proposed Action, the 1948 Tripartite Agreement would be terminated as it applies to the Indian Lakes area, pursuant to Public Law 101-618 and the 1948 Tripartite Agreement.

Under the Proposed Action, easements would be reserved by the United States for existing irrigation canals and ditches, a possible future Indian Lakes bypass canal, existing recreational activities including camping, picnicking, swimming, fishing, hunting, and similar activities, and for the protection and study of cultural resources. Existing roadways would be dedicated for continued public access. Before action is taken to transfer lands to Churchill County, the Department of the Interior would consult with the Nevada State Historical Preservation Office.

The following assumptions were used to evaluate the potential impacts of transferring the Indian Lakes area to Churchill County, and subsequently to the City of Fallon: (1) the Indian Lakes area would continue to be used for camping, picnicking, swimming, fishing, hunting, hiking, and similar outdoor recreational activities in a natural setting; (2) the level and types of recreational use would not change substantially; (3) Nevada Division of Wildlife (NDOW) would continue to stock fish under a cooperative agreement; (4) the Indian Lakes area would continue to provide fish and wildlife habitat; (5) current livestock grazing permits would continue through November 1995, after which current permits would expire and a new permitting system may be established; (6) the amount of livestock grazing would not change substantially, although the livestock grazing program would be administered by the City of Fallon; and (7) contamination problems would be addressed pursuant to the provisions and procedures of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and liability and responsibility for future remediation actions would be determined subject to Section 120(h) of the Act — at this time, no remedial action has been required or taken; and (8) there would not be any Newlands Project irrigation water rights implied or appurtenant to the Indian Lakes area as part of this transfer.

Under the Proposed Action, the current livestock grazing permits would be valid until the end of the current year, after which the City of Fallon will be responsible for issuing permits.

### 2. Transfer of Indian Lakes Area to the State of Nevada

Public Law 101-618 also lists the State of Nevada as a possible recipient of the Indian Lakes area and, therefore, such an action is considered as a reasonable alternative to the Proposed Action. If the Indian Lakes area was transferred to the State of Nevada, either NDOW or Nevada Division of State Parks (NDSP) could potentially administer the Indian Lakes. However, for the purposes of this environmental assessment, it is assumed that if the Indian Lakes area was transferred to the State, NDOW would be the State agency to administer the Indian Lakes area under this alternative. As under the Proposed Action, the 1948 Tripartite Agreement would be terminated as it applies to the Indian Lakes area, pursuant to Public Law 101-618 and the 1948 Tripartite Agreement. In a report to the 1993 Nevada State Legislature (January 1993), it was recommended that the State not

take title to the Indian Lakes area because of contamination problems and lack of secure water supply.

The same easements as were listed under the Proposed Action would accompany the patent. Administration of the livestock grazing program similarly would likely be more controlled and livestock grazing permits would be open to bid as opposed to being held by particular permittees year after year.

The following assumptions were used to evaluate the potential impacts of transferring the Indian Lakes area to the State of Nevada: (1) the Indian Lakes area would continue to be used for camping, picnicking, swimming, fishing, hunting, hiking, and similar outdoor recreational activities in a natural setting; (2) the level and types of recreational use would not change substantially; (3) Indian Lakes would continue to be stocked with several species of game fish; (4) the Indian Lakes area would continue to provide fish and wildlife habitat; and (5) current livestock grazing permits would continue through November 1995, after which current permits would expire and permitting would be on a bid system; (6) livestock grazing, which would be administered by NDOW, would be more controlled, and the amount of livestock grazing would likely be reduced; and (7) contamination problems would be addressed pursuant to the provisions and procedures of CERCLA, and liability and responsibility for future remediation actions would be determined subject to Section 120(h) of the Act — at this time, no remedial action has been required or taken; and (8) there would not be any Newlands Project irrigation water rights implied or appurtenant to the Indian Lakes as part of this transfer.

### 3. Inclusion of Indian Lakes Area into Stillwater National Wildlife Refuge

If the Indian Lakes area is not transferred to Churchill County nor to the State of Nevada, the Service would have the option, in accordance with Public Law 101-618 (Title II, Section 206(b)(5)), to submit to Congress a request to expand Stillwater NWR to include the Indian Lakes area (currently part of Stillwater WMA). Stillwater NWR currently is 77,520 acres and Stillwater WMA consists of an additional 122,480 acres. Under this alternative, outdoor recreation, livestock grazing, and other uses would *continue to* be administered under the 1948 Tripartite Agreement until November 1998, when the

agreement terminates. As such, recreational use and livestock use of the Indian Lakes area would continue at current levels through 1998.

However, at the expiration of the 1948 Tripartite Agreement, compatibility requirements of the Service would be used to decide whether existing uses of Stillwater NWR would be maintained and at what level they would be maintained. National Wildlife Refuges are managed under the doctrine of dominant use, with wildlife being the dominant use. Any other use (including livestock grazing and recreation) is considered secondary. Before any secondary use can be permitted on a National Wildlife Refuge, it first must be determined to be compatible with the purposes of the refuge. Specific to Stillwater NWR, which currently is managed under the 1948 Tripartite Agreement, secondary uses must be eliminated by November 1998 if they are not shown to be compatible with the purposes for which Stillwater NWR was established. The refuge was established to (1) maintain and restore natural biological diversity; (2) provide for the conservation of fish and wildlife and their habitats; (3) fulfill international treaties on fish and wildlife; and (4) provide opportunities for scientific research, environmental education, and fish and wildlife oriented recreation. Based on these purposes, recreational use and livestock would have to be more stringently controlled. It is possible that livestock grazing would be reduced from existing conditions or eliminated.

To evaluate the potential impacts of incorporating the Indian Lakes area into Stillwater NWR, the following assumptions were used: (1) the Indian Lakes area would continue to be available to the public for fishing, hunting, hiking, and other fish and wildlife oriented recreational activities, possibly including overnight camping, in a natural setting; (2) the level and types of recreational use would be more controlled to reduce adverse impacts to lake shore habitat and disturbance of wildlife; (3) fish stocking in Indian Lakes would be reduced or eliminated; (4) the Indian Lakes area would continue to provide fish and wildlife habitat; (5) following November 1998, livestock grazing would be reduced or eliminated; (6) water contamination problems would be addressed pursuant to Service policy and applicable legislation; and (7) water rights acquired for wetland protection may be used in the Indian Lakes area to provide primary wetland habitat, provided that such use is compatible with the purposes of the Stillwater NWR and specified in a wetland management plan.

### 4. No Action - Retain Indian Lakes Area as a Bureau of Reclamation Withdrawal

Under the No Action Alternative, the Indian Lakes area would remain under the 1948 Tripartite agreement until November 1998 at which time the agreement would sunset and the Newlands Project operator would resume sole administration of the area on behalf of the Bureau of Reclamation. The area would remain as federally-owned public lands under Bureau of Reclamation withdrawal. This alternative would take place, if (1) none of the other alternatives are implemented and (2) the Indian Lakes area is identified, in accordance with Public Law 101-618 (Title II, Section 206(b)(5)), as no longer warranting continued status as a part of the National Wildlife Refuge System.

The following assumptions were used in evaluating the potential impacts of implementing this alternative: (1) the Indian Lakes area would continue to be used for camping, picnicking, swimming, fishing, hunting, hiking, and similar outdoor recreational activities in a natural setting; (2) the level and types of recreational use would not change substantially, but a separate entity would likely be contracted to manage recreational use; (3) NDOW would continue to stock fish under a cooperative agreement; (4) the Indian Lakes area would continue to provide fish and wildlife habitat; (5) the amount of livestock grazing would not change substantially, but would likely be managed under contract by a separate entity; and (6) water contamination problems would be addressed pursuant to Bureau of Reclamation policy and applicable legislation.

### 5. Alternatives Considered but not Studied in Detail

Transfer of the Indian Lakes area to the Fallon Paiute-Shoshone Indian Tribes (Fallon Tribes) was identified as an alternative, but was excluded from further analysis for the following reasons: (1) Public Law 101-618 does not identify the Fallon Tribes as a possible recipient of the Indian Lakes area, (2) the possibility of transferring the Indian Lakes area to the Fallon Tribes was not formally identified during negotiations that led to Public Law 101-618, *and* (3) the Indian Lakes area was not identified as a possible area for expansion of the Fallon Tribal lands in discussions of Public Law 95-337. In short, there is no history of legislative intent or action for transferring the Indian Lakes area to the Fallon Tribes.

### 6. Summary of Impacts of Alternatives

Effects of implementing the alternatives are summarized in Table 1.

Table 1. Comparative analysis of alternatives.

| SIGNIFICANT ISSUES | ALTERNATIVES | | | |
|---|---|---|---|---|
| | Transfer To County (Proposed Action) | Transfer to State | Inclusion into Stillwater NWR | Retain as Bureau of Reclamation Withdrawal (No Action) |
| Fish and Wildlife | Wildlife habitat would continue to be provided. Wildlife use of Indian Lakes would continue at current levels. No impacts to threatened or endangered species. | Wildlife habitat would continue to be provided. Wildlife would respond favorably to increased control over livestock grazing. No impacts to threatened or endangered species. | Wildlife habitat would continue to be provided. Wildlife would respond favorably to increased control over recreation and livestock grazing. No impacts to threatened or endangered species. | Wildlife habitat would continue to be provided. Wildlife use of Indian Lakes would continue at present levels. No impacts to threatened or endangered species. |
| Water Quality | Problems with contaminants or hazardous wastes that originated prior to transfer would be corrected as directed by CERCLA[1]. | Problems with contaminants or hazardous wastes that originated prior to transfer would be corrected as directed by CERCLA. | Problems with contaminants or hazardous wastes that originated prior to the transfer would be addressed pursuant to U.S. Department of the Interior and Service policy and applicable legislation. | Problems with contaminants or hazardous wastes that originated prior to the transfer would be addressed pursuant to U.S. Department of the Interior and Bureau of Reclamation policy and applicable legislation. |
| Newlands Project Operations | No impacts to Newlands Project operations. | No impacts to Newlands Project operations. | No impacts to Newlands Project operations. | No impacts to Newlands Project operations. |
| Outdoor Recreation | Unchanged from current conditions. | Little change from current conditions. | Increased control over recreation; possible reduction in recreational use. | Unchanged from current conditions. |
| Commercial Uses | Amount unchanged from current conditions, although existing permits would be canceled. | Reduced amount of livestock grazing; a bid system would be implemented. | Reduced amount of livestock grazing; possible elimination of livestock grazing. | Unchanged from current conditions. |

[1] CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

## III. AFFECTED ENVIRONMENT

### A. INTRODUCTION - ENVIRONMENTAL SETTING

The Indian Lakes area, situated near the middle of the Lahontan Valley, is located northeast of Fallon in Churchill County, Nevada (Figure 1). At present, it is part of Stillwater WMA. The Lahontan Valley, known also as the Carson Desert, encompasses an area of about 2,000 square miles (1.3 million acres) of nearly flat terrain. Soils of the Lahontan Valley consist of unconsolidated, fine-grained Pleistocene lake and playa deposits, young fan gravels and prograding delta deposits of the Quaternary period (Willden and Speed 1974). In general, the soils range from sands to clay with medium textures. Water in the Lahontan Valley typically is alkaline.

#### 1. Lakes

Most of the 10,240 acres (9,355 acres of public land) encompassing the Indian Lakes area are desert shrublands (90 percent) with about 645 acres of lakes and ponds. The Carson River cuts across the northeast corner of the Indian Lakes area. The lakes in the area are the primary focus of the Proposed Action and alternatives. In total there are 34 lakes and ponds within the Indian Lakes area with six of those lakes (Likes, Papoose, Big Indian, Upper, Twin, and Vaughn) comprising the majority of the surface water area (Figure 2). Sportsmen constructed earthen dikes and water control structures (gates, outlets pipes, and canals) in the early 1940s (USFWS 1957) to enlarge and impound more water in four (Likes, Papoose, Big Indian, and Upper) of the six lakes. The main lakes are about six feet deep on average. Big Indian Lake, the largest lake, is about 107 acres and 12 feet deep at full capacity. Full capacity of this lake rarely occurs.

These "developed" lakes receive surface water from the Newlands Project via irrigation canal laterals and drains. Irrigation water and drainwater are routed through the D-Line canal and Indian Lakes to supply downstream water-right lands. The main lakes are connected by canals or ditches and water is released from one lake to another to maintain lake levels and provide interim storage for irrigation deliveries to downstream water right holders (see Newlands Project operations). The other lakes and ponds are supplied by

lateral ground-water flow that appears on the surface as the shallow aquifer water table rises seasonally as a result of irrigation.

Prior to their "development", the Indian Lakes were small depressions in the ancient Lake Lahontan dune areas northeast of Fallon. These depression areas formed shallow alkali ponds where spring surface runoff would collect when flooding occurred or as a result of lateral groundwater inflow from the shallow aquifer. Based on a 1868 Government Land Office (GLO) map, there were two alkali ponds in the locations now known as Likes and Papoose Lakes. From these maps, a slough is shown to branch off from the Carson River channel and appears to have provided drainage from the river to these ponds.

The natural flow regime of the Carson River in this area was eliminated as a result of the construction of Lahontan Reservoir and the Newlands Project. Carson River flow downstream of the Newlands Project results from irrigation water draining back into the river channel and when flood conditions occur and water is spilled to the river. Maurer and others (1994) depict two relict channels of the Carson River that once bisected the middle of the Indian Lakes area, roughly following the alignment of Vaughn slough and the Indian Lakes canal. These ancient river channels would have created depressions and swales through the dunes that would later become the Indian Lakes.

2. Desert Shrub Uplands

Uplands of the Indian Lakes area, which comprise more than 90 percent of the acreage base, are characterized by nearly level to rolling terrain. The areas of rolling terrain are covered by sand dunes that are stabilized by vegetation. Soils of the uplands are sandy.

Precipitation averages about 5 inches per year, which substantially limits the type of vegetation that can potentially grow in upland areas. Summer day-time temperatures are generally in the upper 80s and low to mid 90s (° Fahrenheit), but late summer temperatures at times exceed 100° Fahrenheit. Winter day-time temperatures are generally above freezing; sub-zero temperatures are uncommon in most winters.

## B. WATER QUALITY

Surface water reaching the Indian Lakes is mainly comprised of irrigation water and drainwater. Generally, drainwater is poorer quality water than irrigation water (Kerley and others 1993 and Lico 1992). Because irrigation water leaches through soils during the irrigation process, irrigation drainwater contains higher concentrations of chemicals and trace elements.

Specific conductance of the irrigation water that ultimately flows into the Indian Lakes ranges, on average, 400 to 600 microsiemens per centimeter ($\mu$S/cm) and the pH is alkaline at about 8.4 (Rowe and others 1991). Specific conductance is an indirect measure of total dissolved solids in water and is a general indicator of water quality. Dissolved solids average about 300 milligrams per liter (mg/L) in irrigation water in this area. Total dissolved-solids (TDS) concentrations in drainwater are about 1,170 mg/L (Kerley and others 1993) and pH readings are about 8.5 or higher. Increased dissolved-solids concentrations indicate there is an increase in the concentrations of other trace elements because of the known positive correlation between TDS and arsenic (written communication, P. Tuttle, U.S. Fish and Wildlife Service, Reno Field Office, 1994), boron, sodium, and chloride concentrations (Hoffman 1994).

While TDS and pH values for surface waters supplying the Indian Lakes area do not exceed Nevada state standards or biological effect levels, specific conductance readings and concentrations of trace elements in the Indian Lakes area have been quite high recently. Bureau of Reclamation (1993) found the levels of arsenic, boron, aluminum, beryllium, cadmium, copper, chromium, iron, mercury, selenium, and zinc to exceeded Nevada State standards for breeding wildlife. Follow-up sampling by the Service and U.S. Geological Survey (USGS) of six isolated ponds found the surface water specific conductance to range from 3,000 to 105,000 $\mu$S/cm and TDS levels as high as 129,000 mg/L (written communication, P. Tuttle and others, U.S. Fish and Wildlife Service, Reno Field Office, 1994). Arsenic, boron, cadmium, copper, and molybdenum concentrations were also found to be very high.

Bureau of Reclamation (1993) studies show that surface waters in some of the lakes have very high levels of arsenic and mercury with moderate levels of selenium. These elements

could present a problem for aquatic life due to chronic exposure and bioaccumulation. Arsenic could pose a public health problem for those who ingest water, eat waterfowl or fish from these waters. Boron levels, also measured at high levels, may inhibit vegetative growth.

While these trace elements and water quality measurements are high, the natural concentrations of some of these elements is unknown. Moderately high to high concentrations of certain trace elements sometimes occur naturally in closed basins. The concentrations of trace elements increase as these shallow surface water bodies evaporate and inflow is diminished. Such conditions were exacerbated during the recent drought of 1987-94. Mercury contamination in this area is an exception to this. Mercury contamination is known to result from mining practices that occurred in the Comstock Lode near Virginia City, Nevada in the late 1800s. Mercury was used to process gold and silver ore and, according to EPA, over 7,000 tons of mercury was released into the watershed. This mercury subsequently washed down the Carson River, some of which reached the Lahontan Valley.

## C. FISH AND WILDLIFE AND THEIR HABITAT

### 1. Lakes

Shoreline vegetation is mainly comprised of saltgrass and wire rush (Baltic rush). However, vegetative cover along shorelines is limited, a consequence of heavy, season-long cattle grazing and, to some extent, recreational use. Several of the lakes are bordered by Russian olives, an introduced species of tree. Another introduced species, salt cedar, also is prevalent on some shorelines. Submergent vegetation includes long-leaf pondweed, sago pondweed, widgeon grass, and coontail. Tall emergent vegetation (e.g., broad-leaved cattail and hardstem bulrush) is scarce.

Most waterfowl use of the area is associated with seep lakes and ponds. This likely is a consequence of the seep lakes and ponds producing comparatively more sago pondweed and other submergent aquatic plants that provide food for waterfowl. The lakes supplied by irrigation water produce little submergent aquatic vegetation. Waterfowl species that nest in the Indian Lakes area include mallards, gadwall, and cinnamon teal. Production by

these species is limited compared to Stillwater NWR and Carson Lake likely because of scarce nesting cover. On the other hand, diversity of waterfowl species can be quite high during spring and fall migration and during winter. Waterfowl species that can be observed in the Indian Lakes area during these times include widgeon, mallards, pintail, green-winged teal, redheads, canvasbacks, ring-necked ducks, lesser scaup, bufflehead, ruddy ducks, Canada geese, and tundra swans.

Other bird species that use Indian Lakes include eared grebes, pied-billed grebes, western grebes, white pelicans, double-crested cormorants, Forster's terns, black terns, snowy and common egrets, and great blue and black-crowned night herons. Indian Lakes is an important feeding area for white pelicans.

Along the shoreline, several species of shorebirds can be found in shallow water or at the waters edge, including willets, American avocets, black-necked stilts, greater yellowlegs, and spotted sandpipers. The Indian Lakes area, however, receives limited use by shorebirds. American robins, black-billed magpies, and northern flickers are common inhabitants of the trees along some shorelines. A variety of swallows, including barn swallows, cliff swallows, and violet-green swallows, frequent the lakes and ponds during summer months. Bald eagles, a threatened species, inhabit some of the lakes during winter months. Red-tailed hawks, northern harriers (marsh hawks), and great horned owls also inhabit the area surrounding some of the lakes and ponds. Other wildlife that inhabit the lakes and ponds and their shorelines include muskrat, long-tailed vole, deer mice, northern leopard frogs, bullfrogs, and garter snakes.

Game fish that are available in Likes Lake, Papoose Lake, and Big Indian Lake include rainbow trout, white bass, largemouth bass, white crappie, yellow perch, green sunfish, bluegill, black bullhead, and channel catfish. All of these fish species, except white crappie and bluegill, have been stocked by NDOW since 1989. Rainbow trout were last stocked in 1992. Non-game fish that inhabit Indian Lakes include common carp, Sacramento blackfish, and tui chub.

Mercury released into the Carson River in the late 1800s by Comstock gold and silver milling practices contaminated river sediment downstream of the Comstock mining district, which is located near Virginia City, Nevada (Cooper and others 1985). Contaminated

sediment was deposited throughout the Lahontan Valley. In 1990, the level of mercury in white bass, white crappie, and carp from Likes, Papoose, Big Indian, and Upper lakes were assessed (white crappie were only sampled from Upper Lake). White bass and white crappie, representing fish-eating fish, had levels of mercury that exceeded that which is considered by the Food and Drug Administration to be safe for human consumption (Tuttle 1992). All carp samples were below this level. Cooper and others (1985) and Sevon (1986) documented that mercury residues in fish collected from the Indian Lakes area exceeded the Federal Drug Administration (FDA) action level. They sampled fish from several trophic levels (e.g., detritivores, planktivores, and piscivores).

The Nevada State Division of Health issued a health advisory in 1987 for game fish taken from waters of the Lahontan Valley, which include Indian Lakes, due to elevated mercury levels found in game fish. The health advisory advises that adults eat no more than one eight-ounce serving of fish per week and that children 12-15 years old eat no more than one four-ounce serving of fish per week. It also advises that children under 12, pregnant women, nursing mothers, and women who may soon become pregnant not eat any fish from Lahontan Valley waters.

### 2. Desert Shrub Uplands

The uplands of the Indian Lakes area are characterized by rolling dune habitat. Vegetation is dominated by big greasewood and shadscale (two species of shrub). Other commonly occurring shrubs include spiny hopsage and rabbitbrush. Grasses include salt grass and indian ricegrass.

The following wildlife species have been observed or are expected to occur in the desert shrub habitat in the Indian Lakes area: loggerhead shrikes, sage thrashers, sage sparrows, whitetail antelope ground squirrels, Great Basin kangaroo rats, pale kangaroo rats, black-tailed jackrabbits, mountain cottontails, coyotes, desert horned lizards, and Great Basin fence lizards. Horned larks inhabit areas of low vegetation.

### 3. Threatened and Endangered Species

Bald eagles, federally listed as a threatened species under the Endangered Species Act, use Indian Lakes as a feeding area during the winter. Peregrine falcons, federally listed as an endangered species, occasionally visit the Indian Lakes area. Two species listed nationally as Category 2 candidate species that occasionally use Indian Lakes are the black tern and white-faced ibis. Category 2 candidate species are those that have been proposed for listing as threatened or endangered, but that the Service lacks sufficient information on vulnerability and threats.

Although they do not inhabit the Indian Lakes area, concerns have been raised that the Proposed Action has the potential to impact the cui-ui of Pyramid Lake. Cui-ui, a fish species that inhabits Pyramid Lake and spawns in the lower Truckee River, are federally listed as an endangered species. The basis of the concern is that any increase in Carson Division irrigation demand could result in increased water diversions from the Truckee River, which would adversely impact cui-ui.

## D. NEWLANDS PROJECT OPERATIONS

The Truckee-Carson Irrigation District (TCID), as the Newlands Project operator, stores water in the "developed" Indian Lakes and operates the lakes to make irrigation deliveries to the Thirty-One Corporation farm. Additionally, water is diverted via the D-Line canal in the Indian Lakes area to meet the entitlements of two other water-right holders (Wolf and Alves). These three irrigators have a combined total of 490 acres of water-righted land. In the future, Stillwater NWR may take deliveries of irrigation water to the northwest side of the refuge through the Indian Lakes. Water reaches the "developed" Indian Lakes through the D-Line Canal and has been comprised of irrigation water released from Lahontan Reservoir, drainwater, or spills. Drainwater from the adjacent irrigated lands in the Factory subdistrict of the Newlands Project also reaches the Indian Lakes area through Vaughn slough.

The volume of inflow to the Indian Lakes varies each year depending on hydrologic conditions and irrigation demand. During the period of 1975 to 1993, the average annual inflow to the "developed" Indian Lakes was 12,248 acre-feet per year with a recorded low

of 987 acre-feet in 1992 to a high of 30,096 acre-feet in 1986 (Bureau of Reclamation 1993).

Outflow or releases from the "developed" Indian Lakes are made to meet the downstream water-righted irrigation demand. As the Service acquires more irrigation water rights for use at Stillwater NWR (pursuant to Public Law 101-618), additional water may be routed to the northwest portion of the refuge through the D-Line Canal and Indian Lakes. Such actions would potentially increase inflows and outflows from the "developed" Indian Lakes. The Memorandum of Understanding known as the Fleishmann Agreement (Contract No. 0-07-20-W0214, September 26, 1980) specifies the return flows or drainwater that reach Sagouspi Dam can be diverted to Indian Lakes when available. Such water is only available if TCID chooses not to use it for other Newlands Project purposes. The Indian Lakes have no water rights and the Bureau of Reclamation and TCID have no obligation to provide water to these lakes.

In 1989, a full irrigation delivery year, Bureau of Reclamation records show that about 6,300 acre-feet of water was released from the "developed" Indian Lakes to meet downstream irrigation demands. Of the water released, about 387 acre-feet was delivered to irrigate the water-righted lands (Bureau of Reclamation 1993) and the remainder evaporated or seeped into the ground during conveyance. In that same year, inflows to the "developed" Indian Lakes were about 6,500 acre-feet. It is anticipated that, as the Newlands Project operator continues to adjust and modify project operations to improve irrigation delivery efficiency rates as prescribed in the 1988 Newlands Project Operating Criteria and Procedures (OCAP), the Indian Lakes will be more of a pass-through system of regulating reservoirs rather than a series of small storage reservoirs as was the situation in the past.

## E. OUTDOOR RECREATION

The Indian Lakes area is used by the public for outdoor recreational activities ranging from sightseeing to hunting and fishing. The areas surrounding the "developed" lakes experience the greatest recreational use. The recreational day-use is generally related to fishing and hunting, but there is a fair amount of overnight camping that occurs at Indian Lakes.

Under the existing 1948 Tripartite Agreement, the Service cooperates in the management of the Indian Lakes area for grazing and wildlife. As part of the Service's management of the area, it provides limited facilities (portable out houses and litter collection) for day-use recreation (hunting and fishing) and overnight camping. NDOW stocks the "developed" lakes with fish and has supplied about 41,000 fish to Likes Lake between 1990 and 1993. Prior to that time (1975-89), NDOW had stocked Indian Lakes with more than 97,000 trout. Both agencies provide law enforcement protection and regulation for the Indian Lakes. Camping is limited to 14 days and vehicle use is restricted to existing roads and trails.

Recreational use monitoring conducted by the Service in the spring of 1992 indicates that 84 percent of Indian Lakes recreational users are from Fallon and 88 percent are repeat visitors. At the time the 1992 survey was conducted, recreational use was predominately related to general recreation (sightseeing, birdwatching, and hiking) due to the time of the year and a limited water supply. Based on the Service's traffic counts (1989-94), combined with the average number of people per vehicle (3.1, according to the 1992 survey), the Indian Lakes area averages about 11,900 visitors per year. Sufficient data are not available to estimate the number of people that hunt and camp at Indian Lakes.

Fishing at Indian Lakes has, in the past (1982-88), supported about 10,900 angler-use days per year (Nevada Division of Wildlife 1992). Since that period, as water supply has been reduced due to drought conditions and changes in Newlands Project operations, recreational fishing has declined. Angler-use days have averaged about 2,500 for the more recent 1989-91 period (Nevada Division of Wildlife 1992). The 1989-91 average may be more representative of angler use at Indian Lakes.

In a recent economic study by Sunding (1994), recreation expenditures for general recreation, hunting, and fishing were calculated by adjusting data presented in the *1985 National Survey of Fishing, Hunting and Wildlife-Associated Recreation - Nevada* (U.S. Fish and Wildlife Service 1985) to reflect local origin and current dollar values. The resulting expenditures per day are $25.84 for fishing and $3.21 for general recreation (Sunding 1994). Using these figures, the it is estimated that fishing generates about $64,600 per year in recreational expenditures in Churchill County. This combined with general recreation, which generates about $38,200 per year, would indicate that the Indian Lakes

area generates about $102,800 per year in local expenditures from recreational use of the area. Due to the lack of specific use-data, these figures do not include recreational expenditures related to camping and hunting specific to this area.

## F. COMMERCIAL USES

### 1. Livestock Grazing

Marshall (1951) estimated that about 98 acres along 60 miles of Indian Lakes shoreline offered suitable livestock grazing. These figures include the shoreline of East Lake, which is not included in the proposed transfer, so the acreage of lands suitable for livestock grazing would be somewhat less. Surrounding desert shrub habitats also are grazed by livestock, but are of lesser quality for this activity.

The Indian Lakes area is within the Pelican Island-Indian Lakes grazing allotment of Stillwater WMA (commonly called the open area for the purpose of grazing cattle), an area of approximately 82,000 acres. Because records of livestock grazing in this area are kept as one unit, it is not possible to determine the number of animal unit months (AUMs) of forage that are harvested from the Indian Lakes area. During the past five years (1990-1994), five to seven permittees have grazed their livestock, primarily cattle, in this area each year. During this period, the Pelican Island-Indian Lakes grazing allotment supported an average of 6,117 AUMs per year, for an average payment of $15,293.50 per year to TCID. All revenue from livestock grazing on Stillwater WMA goes directly to the Newlands Project operator (currently TCID) under terms of the 1948 Tripartite Agreement.

### 2. Commercial Fisheries

Common carp and Sacramento blackfish are periodically harvested from several lakes, including Likes Lake, Papoose Lake, and Big Indian Lake. The emphasis of the commercial fishing program is to control carp and Sacramento blackfish populations. Several hundred to several thousand pounds are removed about every one to three years under a special use permit by the Service.

### 3. Muskrat Trapping

Muskrat trapping has not occurred in the Indian Lakes area for at least 10 years.

## G. CULTURAL RESOURCES

The Indian Lakes area is well within the historic range of the *Toedokado* (or, "tule eaters"), a group of the Northern Paiute. The winter habitations of the *Toedokado* were located near the present town of Stillwater (Raven and Elston 1989). During other seasons, much of their activities were associated with Stillwater Marsh and immediately surrounding areas, although they also travelled into the Stillwater Range and possibly as far as Pyramid Lake, and the Clan Alpine and Desatoya ranges. Native people occupied the Lahontan Valley for at least 8,000 years prior to settlement of the area by Euro-Americans in the latter part of the 19th century (Elston 1986).

Based on a archeological site prediction model developed by Intermountain Research for Stillwater NWR/WMA (Raven and Elston 1989), roughly half of the Indian Lakes area was comprised of habitat that would have been conducive to seasonal or permanent residential settlements. These and other habitats within the Indian Lakes area were used for harvesting seeds and other plant material and for hunting. As such, there is a relatively high likelihood, based on the model, that archeological sites exist within the Indian Lakes area. However, verification of the prediction is limited. Although evidence of hunting by native inhabitants has been documented, no physical evidence of residences has been discovered in the Indian Lakes area.

## IV. ENVIRONMENTAL CONSEQUENCES

### A. ENVIRONMENTAL SETTING

Based on the assumptions described for each alternative in Section II, none of the alternatives would impact hydrology, topography, or air quality.

### B. WATER QUALITY

None of the alternatives would adversely change water quality that which occurs under existing conditions. Under the Proposed Action and the Transfer to the State Alternative, the Department of the Interior, pursuant to requirements of CERCLA, would be responsible for mitigating those water contamination problems deemed the responsibility of the federal government (under CERCLA) if remediation of contaminants is required. To date, no remedial action has been required or taken. Under the Inclusion of Indian Lakes into Stillwater NWR Alternative and the No Action Alternative, problems with contaminants or hazardous wastes that originated prior to the transfer would be addressed pursuant to policies of the Department of the Interior and applicable legislation.

### C. FISH AND WILDLIFE AND THEIR HABITAT

#### 1. Proposed Action - Transfer of Indian Lakes Area to Churchill County

Under the Proposed Action, habitat conditions would not change substantially from current conditions. As the Indian Lakes area would continue to be used for fish, wildlife, and outdoor recreation, it would continue to provide habitat for many species of wildlife and several species of fish. However, high recreational use along the shoreline of Likes Lake would continue to contribute to compacted soils, which would continue to limit vegetative growth along the shoreline. Livestock grazing would contribute to compacted soils and would continue to maintain a low amount of vegetative cover surrounding lakes and ponds. This would continue to limit waterfowl production and use of shoreline areas by wildlife.

Use of the Indian Lakes area by wildlife for breeding, feeding, and other purposes, under the Proposed Action, would not change substantially from existing conditions. High levels of recreational use around Likes Lake and to a lesser extent the other lakes would continue to impair shoreline habitat and disturb wildlife using the lakes and their shorelines.

Bald eagles would not be adversely impacted under the Proposed Action, based on the assumptions outlined for this alternative (Section II). Because diversions from the Truckee River would not increase as a result of the Proposed Action or other alternatives, cui-ui would not be adversely impacted. The Proposed Action would not result in the loss or degradation of wetlands or floodplains, nor would it increase the risk of flood impacts to human safety, health, or welfare.

2. Transfer of Indian Lakes Area to the State of Nevada

Habitat conditions could improve somewhat under this alternative as a result of livestock grazing being more controlled. Increased cover of herbaceous vegetation surrounding lakes and ponds would increase the potential for higher waterfowl production. In general, wildlife would benefit from increased control over recreational use and livestock grazing. Bald eagles would not be adversely impacted by this alternative, based on the assumptions outlined under Section II. Because diversions from the Truckee River would not increase as a result of the Proposed Action or other alternatives, cui-ui would not be adversely impacted. The Proposed Action would not result in the loss or degradation of wetlands or floodplains, nor would it increase the risk of flood impacts to human safety, health, or welfare.

3. Inclusion of Indian Lakes Area into Stillwater National Wildlife Refuge

Assuming that recreational use would be much more restricted and livestock grazing would be reduced substantially or eliminated, habitat conditions for wildlife would improve markedly under this alternative. Cover of herbaceous vegetation surrounding the lakes and ponds would be maintained at higher levels.

Wildlife associated with the areas surrounding lakes and ponds would benefit from this alternative as a consequence of recreational use being more controlled and livestock

grazing being reduced or eliminated. Higher amounts of vegetative cover in areas adjacent to lakes would increase the potential for higher waterfowl nesting success. It also would provide other species of wildlife with higher quality nesting and hiding cover. While vegetation in desert shrub habitats likely would not change significantly, less grazing of Indian ricegrass by livestock would benefit wildlife species that use this native bunchgrass for food and/or cover.

Bald eagles would not be adversely impacted by this alternative, based on the assumptions outlined under Section II. Because most of the recreational use of the Indian Lakes area currently takes place during the summer, reduced recreation would not translate into benefits for bald eagles because they use the area during the winter.

4. No Action - Retain Indian Lakes Area as a Bureau of Reclamation Withdrawal

Under this alternative, habitat conditions would not change substantially from current conditions. Based on assumptions listed earlier for this alternative (Section II), habitat conditions would be similar to those described under the Proposed Action.

## D. NEWLANDS PROJECT OPERATIONS

Newlands Project operations would be unaffected by the Proposed Action and other alternatives being considered. If the Indian Lakes area is transferred to Churchill County, State of Nevada, or the Service, easements would be established along existing Newlands Project delivery canals and drains. Furthermore, an easement would be established for the construction of an Indian Lakes bypass canal, if such a canal is constructed.

The transfer of the Indian Lakes area to Churchill County or the State could provide an opportunity for them to transfer valid Newlands Project irrigation water rights to Indian Lakes for maintenance of minimum pool levels for fish, recreation, or municipal use. While transferring water rights to Indian Lakes is not part of the Proposed Action or any of the alternatives, transferring the Indian Lakes area to Churchill County or the State makes possible such an opportunity, subject to the Alpine Decree, Nevada state statutes, and federal regulations governing Newlands Project operations. If the entity that receives the Indian Lakes area seeks to transfer water rights that have historically been put to beneficial

use and are uncontested at the 2.99 AF/acre/year use-rate (municipal and industrial (M&I) or recreation use-rate), there would not be an increase in Carson Division irrigation demand or increase in Truckee River diversions for Newlands Project irrigation. Newlands Project water rights would not be approved for transfer unless such rights could be shown to have been previously put to beneficial use (R.C. LeSueur, Chief, Fallon Field Office, Bureau of Reclamation, written communication).

## E. OUTDOOR RECREATION

### 1. Proposed Action - Transfer of Indian Lakes Area to Churchill County

Recreational use of the Indian Lakes area would not change substantially from current conditions, based on assumptions outlined in Section II for the Proposed Action. The area would continue to be used for camping, picnicking, swimming, fishing, hunting, hiking, and similar outdoor recreational activities.

### 2. Transfer of Indian Lakes Area to the State of Nevada

Based on the assumptions listed for this alternative in Section II, recreational use of the Indian Lakes area would not change substantially from current conditions.

### 3. Inclusion of Indian Lakes Area into Stillwater National Wildlife Refuge

Under this alternative, it is possible that, after the 1948 Tripartite Agreement expires in November 1998, recreational use would be reduced from present levels to meet the Service's compatibility standards. For visitors that desire unstructured and unregulated camping and day use, the quality of recreational experiences may decline as a result of this alternative. For visitors that desire more structured recreation and lower densities of recreators, the quality of recreational experiences may increase. Although fishing would likely continue to be permitted, reduced stocking of game fish would result in less fishing opportunities.

4. No Action - Retain Indian Lakes Area as a Bureau of Reclamation Withdrawal

It is assumed, for the purposes of this environmental assessment, that recreational use of the Indian Lakes area would not change substantially from current conditions under this alternative. As such, the area would continue to be used for camping, picnicking, swimming, fishing, hunting, hiking, and similar outdoor recreational activities. However, a letter submitted by G. Harms (Bureau of Reclamation, Carson City, Nevada, September 13, 1995) indicated that, if this alternative were implemented, the Bureau of Reclamation may limit public access for recreation, especially fishing, due to contaminant issues.

F. COMMERCIAL USES

1. Proposed Action - Transfer of Indian Lakes Area to Churchill County

Based on the assumptions presented in Section II, the amount of livestock grazing, commercial fishing, and muskrat trapping that occur in the Indian Lakes area would not change substantially from current conditions. However, the management of these programs would, under the Proposed Action, be conveyed to the City of Fallon. However, the current livestock grazing permits would be valid until the end of the current year, after which they would be terminated and permits would be subject to the City of Fallon's policy on livestock grazing use.

Revenues collected from livestock grazing and muskrat trapping permits for the Indian Lakes area would no longer be paid to the Newlands Project operator. This would reduce the total revenue received by the Newlands Project operator to a small degree, but could increase revenue collected by the City of Fallon.

2. Transfer of Indian Lakes Area to the State of Nevada

Changes in the management of livestock grazing under this alternative could reduce the amount of livestock grazing in the Indian Lakes area. Furthermore, the livestock grazing program would be managed on a bid system, which potentially could adversely impact permittees that currently graze cattle in the Indian Lakes area. It is assumed that harvesting of common carp and Sacramento blackfish and trapping of muskrat would continue under this alternative.

Revenues collected from livestock grazing and muskrat trapping permits for the Indian Lakes area would no longer be paid to the Newlands Project operator. Total revenue received by the Newlands Project operator would decline to a small degree, but revenue collected by the State of Nevada would increase.

### 3. Inclusion of Indian Lakes Area into Stillwater National Wildlife Refuge

To meet the Service's compatibility standards following the transfer of the Indian Lakes area to the Service (after November 1998), livestock grazing would likely be reduced or eliminated. However, management of Stillwater NWR, including the livestock grazing program, will be addressed by a comprehensive management plan and accompanying National Environmental Policy Act (NEPA) documentation. NEPA documentation would be completed before this alternative would be implemented.

Before any secondary use can be permitted on a National Wildlife Refuge, it first must be determined to be compatible with the purposes of the refuge. A secondary use is any use other than fish and wildlife. Therefore, under this alternative, all secondary uses occurring in the Indian Lakes area would have to be found compatible before they could continue after November 1998. Until November 1998, Indian Lakes and the rest of the Stillwater WMA will continue to be managed under the 1948 Tripartite Agreement.

For the purposes of this environmental assessment, it is assumed that commercial harvest of common carp and Sacramento blackfish would continue. However, further evaluation of this activity would be necessary before the Service could allow it to continue after November 1998. Common carp and Sacramento blackfish are introduced species, and their periodic removal would likely contribute to achieving the purposes of Stillwater NWR if Indian Lakes were incorporated into the refuge. Muskrat trapping also would have to be evaluated further before this activity could continue after sunset of the 1948 Tripartite Agreement.

### 4. No Action - Retain Indian Lakes Area as a Bureau of Reclamation Withdrawal

One of the assumptions of this environmental assessment is that the amount of livestock grazing and commercial fishing that occur in the Indian Lakes area would not change substantially compared to existing conditions. It also is assumed that revenues collected

from muskrat trapping permits would continue to be paid to the Newlands Project operator under this alternative. However, a letter submitted by G. Harms (Bureau of Reclamation, Carson City, Nevada, September 13, 1995) indicated that, if this alternative were implemented, livestock grazing and commercial fishing would probably be discontinued due to contaminant issues. NEPA documentation, however, would be completed before such actions were implemented.

## G. CULTURAL RESOURCES

### 1. Proposed Action - Transfer of Indian Lakes Area to Churchill County

An easement would be retained for the protection and study of cultural resources to ensure that they are protected in perpetuity. This includes undiscovered cultural resources. Furthermore, the Indian Lakes area would continue to be managed for fish, wildlife, and outdoor recreation (as opposed to more intensive land uses). Therefore, cultural resources are not expected to be adversely impacted under this alternative. However, before action is taken to transfer lands to Churchill County, the Department of the Interior would consult with the Nevada State Historical Preservation Office.

### 2. Transfer of Indian Lakes Area to the State of Nevada

As under the Proposed Action, the United States would retain a cultural resource easement on the Indian Lakes area. Therefore, it is not expected that cultural resources would be adversely impacted under this alternative.

### 3. Inclusion of Indian Lakes Area into Stillwater National Wildlife Refuge

Under this alternative, cultural resources would continue to be protected under the National Historic Preservation Act, Antiquities Act and other legislation and policy that provide protection to cultural resources on federal lands.

4. No Action - Retain Indian Lakes Area as a Bureau of Reclamation Withdrawal

Under this alternative, cultural resources would continue to be protected under the National Historic Preservation Act, Antiquities Act and other legislation and policy that provide protection to cultural resources on federal lands.

## V. CONSULTATION AND COORDINATION WITH OTHERS

Written documentation of interest in transferring the Indian Lakes area to a non-federal entity began in the late 1970s, at which time NDOW (Nevada Division of Wildlife), NDSP (Nevada Division of State Parks), and the Service jointly pursued legislation to create a state recreation area to be administered by NDSP (J.L. Meder, Administrator, NDSP, written communication, 1979). Several meetings variously participated by the Service, NDOW, NDSP, Churchill County, the City of Fallon, and TCID were held during 1978-1979 (Refuge files). All parties appeared to be in favor of the concept. Assembly Bill 701, introduced into the Nevada State Legislature in the spring of 1979, would have issued state general obligation bonds to raise $680,000 for the acquisition of land to establish a state park at the Indian Lakes area. The bill was subsequently dropped, and, while there was some interest in reintroducing the bill in the next legislative session, such a bill was not reintroduced.

Interest in creating a recreation area arose again in the late 1980s during negotiations that lead to the enactment of Public Law 101-618. Based on discussions between the Department of the Interior, the Service, the State of Nevada, Churchill County, and other participants of the negotiations, language was written into Public Law 101-618 that authorized the Secretary of the Interior to convey the Indian Lakes area to the State of Nevada or Churchill County. In a report to the 1993 Nevada State Legislature (January 1993), it was recommended that the State not take title to the Indian Lakes area.

Since the passing of Public Law 101-618, informal discussions between members of the Service, State of Nevada, Churchill County, and City of Fallon lead to an eventual proposal that the Indian Lakes area be transferred to Churchill County and subsequently to the City of Fallon (R.H. Erickson, Mayor, City of Fallon, written communication, 1995; A.E.

Mallory, Chief Deputy, Office of the District Attorney of Churchill County, written communication, 1995).

On April 6, 1995, a meeting between the Service, Bureau of Reclamation, and BLM was held to discuss technicalities of the proposed transfer to Churchill County. Issues addressed at the meeting included the continued use of Newlands Project delivery canals and drains, possible construction of an additional delivery canal, continued road access for the public, and continued use of the area for recreation. It was decided that these issues would best be addressed as easements to be included in a BLM patent.

The Fallon City Council discussed the possibility of receiving the Indian Lakes area on February 21 and March 7, 1995. At the April 18, 1995 Fallon City Council meeting, it was reported that a letter of intent to acquire the Indian Lakes area was being prepared. The proposed transfer was also addressed at a Churchill County Commissioners meeting on April 19. On July 19, the Churchill County Commissioners authorized the Chairman to sign the letter of intent that would allow the City of Fallon to continue to pursue the possibility of acquiring the Indian Lakes area, after corrections were made and it was reviewed by the District Attorney's Office (minutes of Churchill County Commissioner's July 19, 1995 meeting). Service personnel met with the Fallon Tribes on April 17, 1995 to discuss the proposed transfer. Service personnel also occasionally met with officials of Churchill County and the City of Fallon, and NDOW personnel to discuss the transfer of the Indian Lakes area.

The draft environmental assessment, accompanied by a letter dated August 23, 1995 was sent or otherwise provided to the agencies, organizations, and individuals listed on the following page. An article describing the Proposed Action and other aspects of the draft environmental assessment was published in the local newspaper (Lahontan Valley News, September 15, 1995) after the draft was released. Readers were informed that copies of the *draft document* were available at the Stillwater NWR office in Fallon. Of the agencies, organizations, and individuals to whom draft environmental assessments were provided by the Service, comments were only received from the Bureau of Reclamation and Nevada State Historical Preservation Society (Refuge files). The U.S. Geological Survey also provided editorial comments. Xerox copies of all comments received are included as an appendix.

List of Agencies, Organizations, and Individuals to Whom the Draft EA was Provided

FEDERAL GOVERNMENT

Department of Interior (Jeffrey Zippin, Team Leader, Truckee-Carson Coordination Office)
Bureau of Land Management (Ken Stowers, Lands Team Leader)
Bureau of Reclamation (Ann Ball, Project Manager)
Bureau of Reclamation (Gene Harms, Chief, Engineering and O&M)
U.S. Fish and Wildlife Service (Dale Hall, Assistant Regional Director, Ecological Services)
U.S. Fish and Wildlife Service (Carlos Mendoza, State Supervisor, Ecological Services)
Bureau of Indian Affairs (Tom Strekal, Fish and Wildlife Biologist, and Lew Fry, Civil Engineer)

TRIBES

Fallon Paiute-Shoshone Tribes (Alvin Moyle, Tribal Chairman)
Pyramid Lake Tribe (Robert S. Pelcyger, Esq.)

STATE GOVERNMENT

Nevada Division of Wildlife (Richard Heap, Regional Manager, Region 1)
Nevada Division of State Lands (Pamela B. Wilcox, Administrator)
Nevada State Historical Preservation Office (Alice Baldrica, Deputy State Historic Preservation Officer)

LOCAL GOVERNMENTS

Churchill County Commissioners
City of Fallon (Ken Tedford, Jr., Mayor)
City of Fallon (Michael Mackedon, Esq.)

OTHER ORGANIZATIONS

Truckee-Carson Irrigation District (Lyman McConnell, Project Leader)
The Nature Conservancy - Nevada (Graham Chisholm, Nevada Projects Director)
Lahontan Valley News (Monie Byers, News Editor)

LIVESTOCK GRAZING PERMITTEES AND ADJACENT LANDOWNERS

James Sloan, Esq.
Albert Mussi
Howard and Barbara Wolf
Stanley Lattin
Sam Hiibel
Margaret Casey
Orval Fowler, Jr.
Less Hiibel
Adelle T. Shupp
Billy L. Cunningham
Maynard and Jacolyn Alves
Ron Albaugh
Micheal R. Rodrigues

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# APPENDIX

Comments Received on the Draft Environmental Assessment
Transfer of Indian Lakes Area to Churchill County, Nevada

Three sets of comments were received during the 30-day comment period (August 23 - September 22, 1995) and during the following 3 months:

1) Gene A. Harms, Chief of Engineering, Bureau of Reclamation, Carson City
2) Ray Hoffman, U.S. Geological Survey, Carson City
3) Eugene M. Hattori, Archeologist, State Historic Preservation Office, Carson City

# United States Department of the Interior

BUREAU OF RECLAMATION
Lahontan Basin Area Office
P.O. Box 640
Carson City NV 89702

IN REPLY REFER TO:



SEP 13 1995

LO-400
ENV-2.00

MEMORANDUM

To: Richard Grimes
U.S. Fish and Wildlife Service
Fallon, Nevada

From: Gene A. Harms
Chief of Engineering
Operations and Maintenance Division

Subject: Draft Environmental Assessment for Transfer of Indian Lakes Area to Churchill County, Nevada

We have reviewed the subject draft Environmental Assessment (EA) and offer the following comments:

- In Figure 1, General Location Map: "Old Reservoir" should be "Old River Reservoir"; the USGS quadrangle map from which this was probably taken is incorrect.

- On page 5, under *1. Proposed Action*, the easements listed in the second paragraph lead one to wonder what is gained by the City of Fallon or Churchill County by this transfer. Other than the roadways and water delivery facilities, the managing entity should have authority to direct activities. If an easement in favor of the public is retained for recreational activities it may create a management problem severely limiting the management and control of the area.

- On page 6, under *1. Proposed Action*, the Bureau of Reclamation questions the advisability of continuing livestock grazing practices due to the unanswered health questions related to trace element contamination in the area.

- On page 6, under *1. Proposed Action*, will the area be fenced from the surrounding area to control cattle grazing on these lands from grazing on the adjacent Federal lands if the Federal lands are closed to grazing?

- On page 7, under *3. Inclusion of Indian Lakes into SNWR*, we question the statement that Stillwater Wildlife Management Area would expire in November 1998. It would seem that under the requirements of Public Law 94-223 that this area should remain as a Wildlife Management Area as long as it remains in Federal ownership.

- On page 8, under *3. Inclusion of Indian Lakes into SNWR*, would fish stocking in Indian Lakes necessarily be reduced or eliminated? This would almost seem to run counter to the mission of the Fish and Wildlife Service.

- On page 9, under *4. No Action*, the administration of these lands after the sunset of the Tripartite agreement would not necessarily remain with the Newlands Project operator as indicated. I think that based on the contract presently in negotiations with the Truckee-Carson Irrigation District, and considering the provisions of Public Law 94-223, Reclamation would assume management of this area and it would continue as a responsibility of the Fish and Wildlife Service.

- On page 9, under *4. No Action*, if the management were to be done by Reclamation, which we question, Reclamation would probably discontinue grazing of livestock due to contamination issues, and we would likely limit public access for recreation and especially fishing due to the contamination issues as well due to the potential liability for the federal government.

- On page 11, under *1. Lakes*, the description of the Carson River bisecting a corner is difficult to visualize.

- On page 11, under *1. Lakes*: "Irrigation water and drainwater is routed to the D-line Canal to supply water to the Indian Lakes." I hope irrigation water is not routed to supply water to Indian Lakes since they have no water rights and deliveries to them would be illegal. It would be more accurate to say, "Irrigation water and drainwater are routed through the D-line Canal and Indian Lakes to supply water to water-righted lands downstream."

- On page 11, last line: "groundwater flow" should be "ground-water flow"; "ground water" is two words when used as a noun and is hyphenated when used as an adjective.

- On page 13: Please include some interpretation of various figures cited on this page. For example, "Specific conductance of the irrigation water that ultimately flows into the Indian Lakes ranges, on average, 400 to 600 microsiemens per centimeter . . ." Is this good or bad? High or low? Does it exceed state or other standards or is it well within normal levels? Adding a short phrase such as "well within state standards" or "an order of magnitude greater than allowable drinking water standards" would make these statements comprehensible without sending us running for our water quality handbooks.

- On page 14, under *1. Lakes*, second paragraph, the statement is made that the aquatic vegetation in the seep lakes and ponds is suitable waterfowl food, yet these ponds are described elsewhere as having the highest levels of contamination from trace elements; this does not seem consistent.

- Page 19, paragraph 2: "Sufficient data is not available ..." should be "Sufficient data *are* not available . . ."; "data" is plural.

- On page 22, under *B. Water Quality*, this paragraph appears to indicate that the Service and Bureau of Reclamation have policies which differ from those of Interior; is that what you intended?

- On page 25, under *D. Newlands Project Operations*: Reclamation does not approve water rights transfers; we provide background information on previous use to determine whether the transfers should be protested by Interior or others.

- On page 26, under *F. Commercial Uses*, there is substantial discussion of muskrat trapping even though there was an earlier statement that no trapping has been done for at least the past 10 years.

- On page 29, under *V. Consultation and Coordination With Others*, it is interesting that the consultation section does not address consultation with any group outside of governmental entities. I would think there could be some interest from recreational groups or environmental groups.

I realize these comments did not meet the established deadline, however, I hope you will consider them.

Jane Williams

U.S. GEOLOGICAL SURVEY, WRD
333 WEST NYE LANE, ROOM 203
CARSON CITY, NV 89706
(702)887-7600
FAX (702) 887-7629

TO: Don DeLong, FWS

FROM: Ray Hoffman

Number of pages (excluding cover): 1

Date: 11/24/95 Time:

Message: Don —

Please the suggested changes to p. 13 of your draft EA. Call me if you have any questions.

Ray H.

CONFIDENTIALITY NOTE

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## B. WATER QUALITY

Surface water reaching the Indian Lakes is mainly comprised of irrigation water and drainwater. Generally, drainwater is poorer quality water than irrigation water (Kerley and others 1993 and Lico 1992). Because drainwater has been leached through soils during the irrigation process, it contains higher concentrations of chemicals and trace elements.

Specific conductance of the irrigation water that ultimately flows into the Indian Lakes ranges, on average, 400 to 600 microsiemens per centimeter (µS/cm) and the pH is alkaline at about 8.4 (Rowe and others 1991). Specific conductance is an indirect measure of total dissolved solids in water and is a general indicator of water quality. It averages about 300 micrograms per liter (µg/L) in irrigation water in this area. Total dissolved-solids (TDS) concentrations in drainwater are about 1,170 µg/L (Kerley and others 1993) and pH readings are about 8.5 or higher. Increased dissolved-solids concentrations indicate there is an increase in the concentrations of other trace elements because of the known positive correlation between TDS and arsenic (written communication, P. Tuttle, U.S. Fish and Wildlife Service, Reno Field Office, 1994), boron, sodium, and chloride concentrations (Hoffman 1994).

While TDS and pH values for surface waters supplying the Indian Lakes area do not exceed Nevada state standards or biological effect levels, specific conductance readings and concentrations of trace elements in the Indian Lakes area have been quite high recently. Bureau of Reclamation (1993) found the levels of arsenic, boron, aluminum, beryllium, cadmium, copper, chromium, iron, mercury, selenium, and zinc to exceeded Nevada State standards for breeding wildlife. Follow-up sampling by the Service and U.S. Geological Survey (USGS) of six isolated ponds found the surface water specific conductance to range from 3,000 to 105,000 µS/cm and TDS levels as high as 129,000 µg/L (written communication, P. Tuttle and others, U.S. Fish and Wildlife Service, Reno Field Office, 1994). Arsenic, boron, cadmium, copper, and molybdenum concentrations were also found to be very high.

Bureau of Reclamation (1993) studies show that surface waters in some of the lakes have very high levels of arsenic and mercury with moderate levels of selenium. These elements could present a problem for aquatic life due to chronic exposure and bioaccumulation.

STATE OF NEVADA
DEPARTMENT OF MUSEUMS, LIBRARY AND ARTS
STATE HISTORIC PRESERVATION OFFICE
Capitol Complex
100 Stewart Street
Carson City, Nevada 89710

BOB MILLER
*Governor*

JOAN G. KERSCHNER
*Department Director*

RONALD M. JAMES
*State Historic Preservation Officer*



October 13, 1995

Mr. Ronald M. Anglin
US Fish and Wildlife Service
Stillwater National Wildlife Refuge
PO Box 1236
Fallon, NV 89407

RE: Indian Lakes Land Transfer to Churchill Co., Churchill Co.

Dear Mr. Anglin:

The Nevada State Historic Preservation Office (SHPO) reviewed the draft EA (August 1995) for the proposed undertaking. The SHPO recommends that the Fish and Wildlife Service consult with this office as per Section 106 of the National Historic Preservation Act of 1966, as amended. The area of potential effect is considered highly sensitive for historic properties, and we recommend initiation of consultation at your earliest convenience.

Please contact Alice Baldrica at (702) 687-6361 or me at (702) 687-6362, if you have any questions concerning this correspondence.

Sincerely,

Eugene M. Hattori
Archaeologist